

Figure 1.

2/20

Peptide 1 KVTIFFGTQK

Peptide 2 KVVDLDDYAADDDEFEEK  
EPeptide 3 KWFTEVAK  
D

Peptide 4 KVVDEIIVEK

Peptide 5 KYADLLNFPK

Peptide 6 KAALHALAK

Peptide 7 KDVHRTLHTIVQEQGSLDSSK

*Figure 2.*

0005 857 2's OTANTO

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*Arabidopsis thaliana* ..350 GSPLES-AVPPPPFPGPCT  
*Catharanthus roseus* ..389 GTPLAGSSLPPPPFP-PCT  
*Helianthus tuberosus* ..331 GTPLGGPTLQPPFP-PCT  
*Vigna radiata* ..366 GTSLGG-SLLPPFPGPS  
*Vicia sativa* ..367 GTSLGG-SLLPPFPGPCT  
 \* . \* . . \*\*\*\* \* .

LGTGLARYADLLNPPRKSALVALAAYATEPSEAEXLKHLTSPDGKD  
 LRTALTRYADLLNTPKKSALLALAAYASDPNEADRLKYLASPAQKD  
 LRKALTNYADLLSSPKKSTLLALAHAASDATEADRLQFLASREGKD  
 LRTALARYADLLNPPRKAALLALATHASEPS-DERLKFLSSPQGKD  
 VRTALACYADLLNPPRKAIVALAAHASEPSEAERLKFLLSSPQGKD  
 . \* \*\*\*\* \* . \* . \* . \* . \* . \* . \* .

EYSQWIVASQRSLLLEVMAAFPSAKPPLGVFFAAIAPRLQPRYYSIS  
 EYAQSLVANQRSLLLEVMAEFPSAKPPLGVFFAAIAPRLQPRFYSIS  
 EYAEWIVANQRSLLLEVMAEFPSAKPPLGVFFAAIAPRLQPRYYSIS  
 EYSKWVVGVSQRSLLLEVMAEFPSAKPPLGVFFAAIAPRLQPRYYSIS  
 EYSKWVVGVSQRSLLLEVMAEFPSAKPPLGVFFAAIAPRLQPRYYSIS  
 \*\* . \* \*\*\*\* . \* . \* . \* . \* . \* . \* . \* . \* .

SCQDWAPSRVHVTSALVYGPTPTGRIHKGVCSTWMKNAV 498..  
 SSPRMAPSRIHVTCALVYEKTPGGRIHKGVCSTWMKNAIP 537..  
 SSPKMVPNRIHVTCALVYEKTPGGRIHKGICSTWMKNAV 479..  
 SSPRFAPQRVHVTCALVYGPTPTGRIHKGVCSTWMKNAIP 513..  
 SSPRPAPQRVHVTCALVEGPTPTGRIHKGVCSTWMKSATP 515..  
 \* . \* . \* . \* . \* . \* . \* . \* . \* . \* . \* .

Figure 3.

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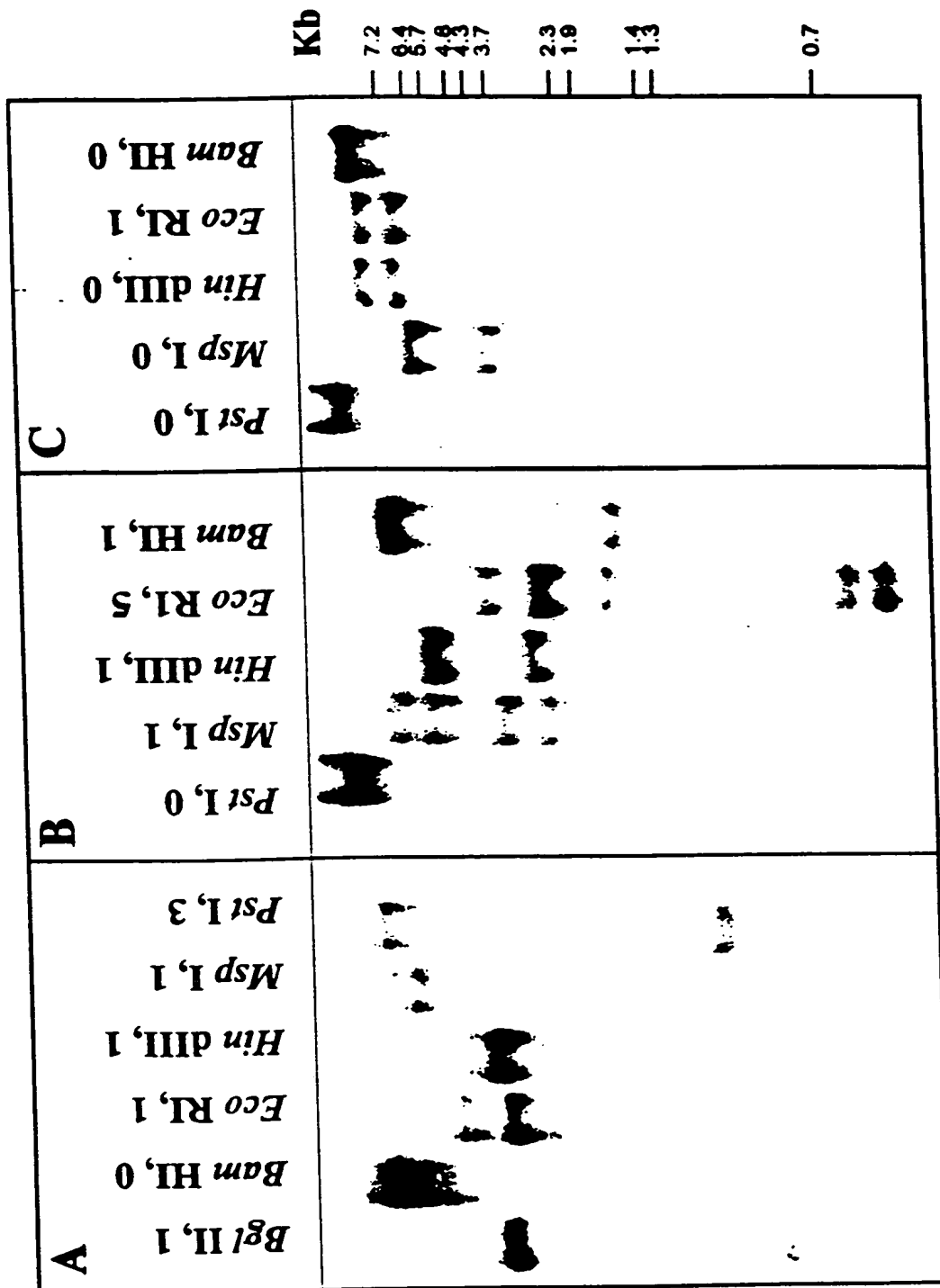


Figure 4.

005070" 76799460

```

1
MEQTAVKVSL FDLFSSILNG KLDPSNFSSD SSAAILIENR EILMILTTAI 50
MGSNNLANSI ESMLG.ISIG ....SEYISD P..... IFIMVTIVA
* * * * *
51 100
AVFIGCGFLY VWRSSNKSS KIVETQKLIV EKEPE.PEVD DGKKKVTIFF
SMLIGFGFFV CMK.SSSSQS KPIETYKPII DKEEEEIEVD PGKIKLTIFF
** ** * * * * *
101 150
GTQTGTAE GF AKALAE EAKA RYEKAIFKVI DLDDYGADDD EFEEKLKKET
GTQTGTAE GF AKALAE EIKA KYKKA VVKV DLDDYAAEDD QVEEKLKKES
*****
151 200
IALFFLATYG DGEPTDNAAR FYKWFTGEGE REMWLQNLQF GVFGGLGNRQY
LVFFMVATYG DGEPTDNAAR FYKWFTQEHE RGEWLQQLTY GVFGGLGNRQY
* ****
201 250
EHFNKVAKEV DEILTEQGGK RIVPVGLGDD DQCIEDDFTA WRELVPELD
EHFNKIAVDV DEQLGKQGAK RIVQVGLGDD DQCIEDDFTA WRELLWTELD
*****
251 300
QLLLDESDKT SVSTPYTAIV PEYRVVFHDA TDASLQDKNW SNANGYTVYD
QLLKDEDAAP SVATPYIATV PEYRVVIHET TVAALDDKHI NTANGDVAFD
*** **
301 350
VQHPCRANVV VKKELHTPVS DRSCIHLEFD ISGTGLTYET GDHVGVIYSEN
ILHPCRTIVA QQRELHKPKS DRSCIHLEFD ISGSSLTYET GDHVGVIYSEN
**** *
351 400
CVEVVEEAER LLGYSSDTVF SIHVDKEDGS PISGSALAPP FPTPCTLRTA
CDETVEEAGK LLGQPLDLLF SIHTDKEDGS PQGSS..LPP FPGPCTLRSA
* * ****
401 450
LTRYADLLNS PKKAALHALA AYASDPKEAE RLRYLASPAG KDEYAQWIVA
LARYADLLNP PRKASLIALS AHASVPSEAE RLRLSSPLG KNEYSKWVVG
* ****
451 500
SQRSLLVVMA EFPSAKAPIG VFFAAVAPRL LPRYYSISS NRMVPSRIHV
SQRSLLEIMA EFPSAKPPLG VFFAAVAPRL PPRYYSISS PKFAPSRIHV
*****
501 550
TCALVHEKTP AGRVHKGVCS TWMKNSVSLE ENHDCSSWAP IFVRQSNFKL
TCALVYGQSP TGRFHRGVCS TWMKHAVPQD S.....WAP IFVRTSNFKL
*****
551 600
PADSTVPIIM IGPGTGLAPF RGFMQERLAL KNSGVELGPA ILFFGCRNRQ
PADPSTPIIM VGPGTGLAPF RGFLQERMAL KENGAQLGPA VLFFGCRNRN
*** ****
601 650
MDYIYEEELN NFVKEGAISE VVVAFSREGA TKEYVQHKMA EKASYIWEMI
MDFIYEDELN NFVERGVISE LVIAFSREGE KKEYVQHKMM EKATDVWNVI
** ***
651 700
SQGAYLYVCG DAKGMARDVH RTLHTIAEQ GSLDNSKTES LVKNLQMDGR
SGDGYLYVCG DAKGMARDVH RTLHTIAEQ GSMESSAAEA AVKKLQVEER
* *****
701
YLRDVW
YLRDVW
*****

```

Figure 5.

TTGATAGATTGTAAGATTCTTGGCTTACCGAGAGGAGTATATTAAATGCATTTAGAGTTTGTGAGAAAAA

TTGATAGATTGTAAGATTCTTGGCTTACCGAGAGGAGTATATTAAATGCATTTAGAGTTTGTGAGAAAAA

[illegible]

*Figure 6b.*

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## Heterologous Expression of P-450 Reductases

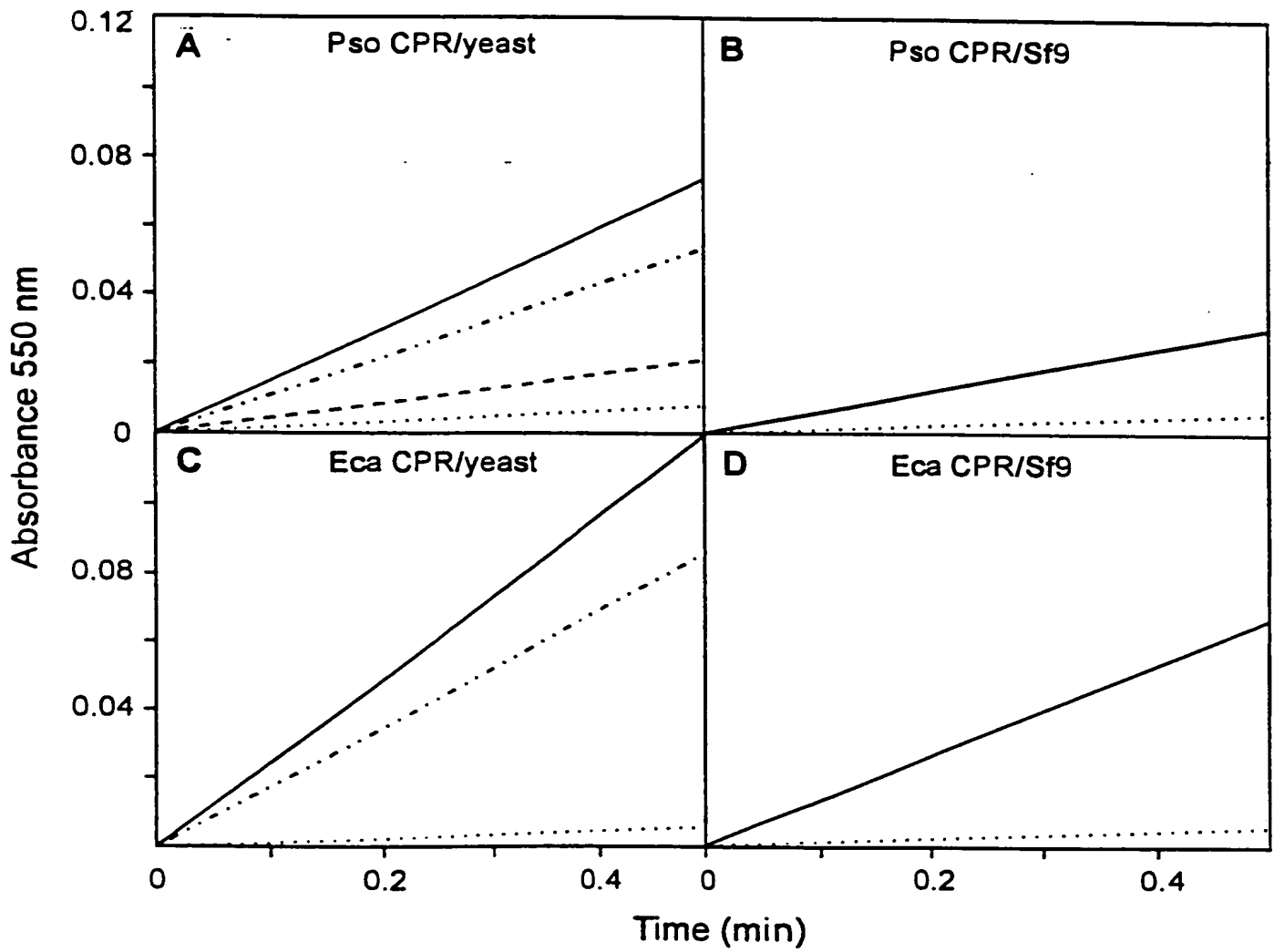


Figure 7.



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00000000 00000000 00000000

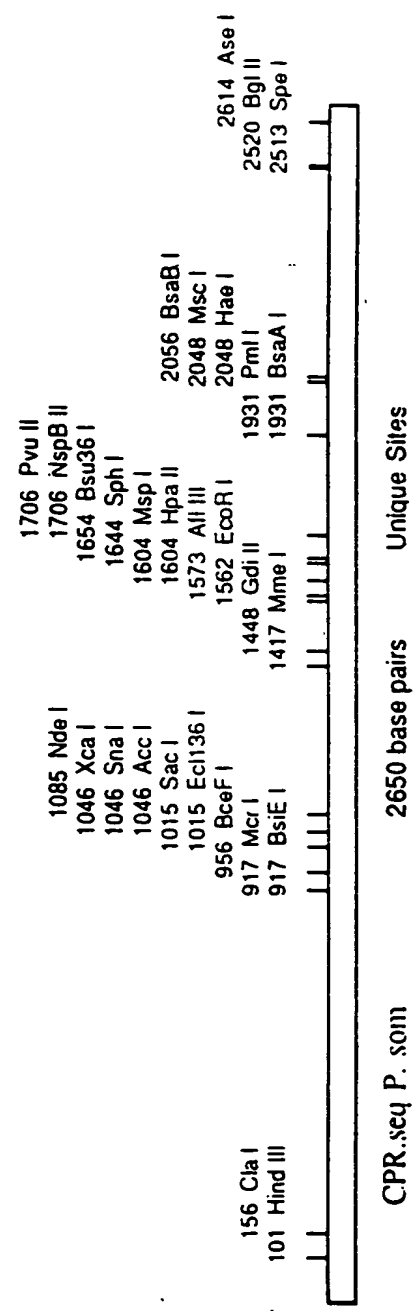


Figure 8a.

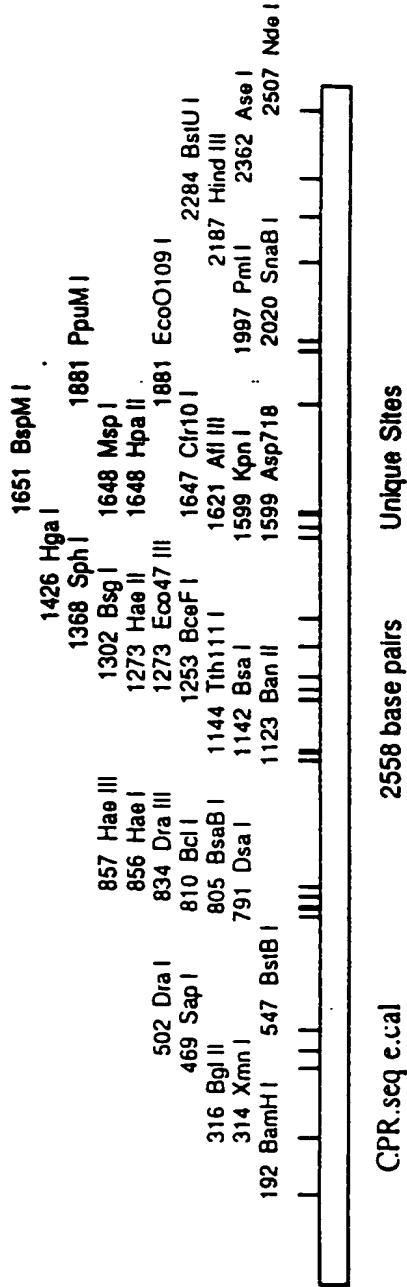


Figure 8b.

1/1	31/11
CGG CAC GAG CTT GTT AGT ATC TTC TAG GGT	TTG AAA AGA AGC ACA GGG AGA AGC AAA AGT
R H E L V S I F * G	L K R S T G R S K S
61/21	91/31
CGA ATC TAC TTG AAA TAC ATT CGA TTG CTT	CTC TCT GTT TAA GCT TCA GAG TCT CTG CTA
R I Y L K Y I R L L	L S V * A S E S L L
121/41	151/51
ATT ATG GGT TCG AAT AAT TTA GCT AAT TCG	ATT GAA TCG ATG TTA GGA ATA TCA ATA GGA
I M G S N N L A N S	I E S M L G I S I G
181/61	211/71
TCA GAA TAT ATT TCT GAC CCA ATT TTC ATT	ATG GTC ACA ACT GTA GCT TCA ATG CTG ATT
S E Y I S D P I F I	M V T T V A S M L I
241/81	271/91
GGA TTT GGT TTC TTC GCA TGT ATG AAA TCT	TCG TCT TCT CAA TCA AAA CCT ATT GAA ACT
G F G F F A C M K S	S S S Q S K P I E T
301/101	331/111
TAT AAA CCA ATA ATT GAT AAA GAA GAA GAG	GAG ATT GAA GTT GAT CCT GGT AAA ATT AAG
Y K P I I D K E E E	E I E V D P G K I K
361/121	391/131
CTC ACT ATA TTT TTT GGT ACT CAG ACT GGT	ACT GCT GAA GGA TTT GCT AAG GCA TTG GCA
L T I F F G T Q T G	T A E G F A K A L A
421/141	451/151
GAA GAA ATT AAG GCA AAG TAC AAG AAA GCA	GTT GTT AAA GTA GTT GAC CTG GAT GAC TAT
E E I K A K Y K K A	V V K V V D L D D Y
481/161	511/171
GCA GCC GAG GAT GAT CAA TAT GAA GAG AAA	TTA AAG AAA GAG TCT TTG GTG TTT TTC ATG
A A E D D Q Y E E K	L K K E S L V F F M
541/181	571/191
GTA GCC ACT TAT GGT GAT GGT GAG CCA ACT	GAC AAT GCT GCG AGA TTT TAC AAA TGG TTC
V A T Y G D G E P T	D N A A R F Y K W F
601/201	631/211
ACT CAG GAA CAT GAA AGG GGA GAG TGG CTT	CAG CAA CTA ACT TAT GGT GTT TTT GGT TTG
T Q E H E R G E W L	Q Q L T Y G V F G L
661/221	691/231
GGT AAC CGT CAA TAC GAG CAT TTC AAC AAG	ATC GCG GTA GAT GTG GAT GAG CAA CTC GGT
G N R Q Y E H F N K	I A V D V D E Q L G
721/241	751/251
AAA CAA GGT GCA AAG CGC ATT GTT CAA GTG	GGG CTC GGT GAC GAT GAT CAA TGC ATT GAA
K Q G A K R I V Q V	G L G D D D Q C I E
781/261	811/271
GAT GAT TTT ACT GCT TGG CGA GAA TTG TTG	TGG ACT GAA TTG GAT CAG TTG CTC AAA GAT
D D F T A W R E L L	W T E L D Q L L K D
841/281	871/291
GAG GAT GCT GCT CCT TCA GTG GCT ACA CCG	TAT ATT GCT ACT GTT CCT GAA TAC AGG GTA
E D A A P S V A T P	Y I A T V P E Y R V
901/301	931/311
GTG ATT CAC GAA ACT ACG GTC GCG GCT CTG	GAT GAT AAA CAC ATA AAT ACT GCT AAC GGC
V I H E T T V A A L	D D K H I N T A N G
961/321	991/331
GAT GTT GCA TTT GAT ATT CTC CAT CCT TGC	AGA ACC ATT GTT GCT CAA CAA AGA GAG CTC
D V A F D I L H P C	R T I V A Q Q R E L
1021/341	1051/351

Figure 9a.

12/20

CAC AAA CCC AAG TCT GAT AGA TCC TGT ATA CAT CTG GAG TTC GAC ATA TCA GGC TCT TCC	1111/371
H K P K S D R S C I H L E F D I S G S S	
1081/361	
CTT ACA TAT GAG ACT GGA GAT CAT GTT GGT GTT TAT GCT GAG AAC TGC GAT GAA ACT GTC	1171/391
L T Y E T G D H V G V Y A E N C D E T V	
1141/381	
GAG GAA GCA GGG AAG CTG TTG GGT CAA CCC CTG GAT TTG CTG TTT TCA ATT CAC ACG GAT	1231/411
E E A G K L L G Q P L D L L F S I H T D	
1201/401	
AAA GAA GAC GGG TCA CCC CAG GGA AGC TCA TTA CCA CCT CCT TTC CCA GGT CCT TGC ACC	1291/431
K E D G S P Q G S S L P P P F P G P C T	
1261/421	
TTA CGA TCT GCC CTA GCA CGC TAT GCT GAT CTT TTG AAT CCT CCT AGA AAG GCT TCT CTG	1351/451
L R S A L A R Y A D L L N P P R K A S L	
1321/441	
ATT GCT CTG TCC GCT CAT GCA TCT GTA CCC AGT GAA GCA GAG AGA TTG CGC TTT TTG TCA	1411/471
I A L S A H A S V P S E A E R L R F L S	
1381/461	
TCA CCT CTG GGA AAG AAT GAG TAT TCA AAA TGG GTA GTT GGA AGT CAG AGG AGT CTT TTG	1471/491
S P L G K N E Y S K W V V G S Q R S L L	
1441/481	
GAG ATC ATG GCC GAG TTT CCA TCA GCA AAA CCC CCT CTT GGT GTT TTC TTT GCT GCA GTA	1531/511
E I M A E F P S A K P P L G V F F A A V	
1501/501	
GCC CCT CGC TTA CCG CCT CGA TAC TAT TCT ATC TCA TCC TCT CCT AAG TTT GCT CCC TCA	1591/531
A P R L P P R Y Y S I S S S P K F A P S	
1561/521	
AGA ATT CAT GTG ACG TGT GCT TTA GTA TAT GGT CAA AGC CCT ACC GGA AGG GTT CAC CGA	1651/551
R I H V T C A L V Y G Q S P T G R V H R	
1621/541	
GGA GTG TGT TCG ACA TGG ATG AAG CAT GCA GTT CCT CAG GAT AGC TGG GCT CCT ATT TTT	1711/571
G V C S T W M K H A V P Q D S W A P I F	
1681/561	
GTT CGA ACG TCA AAC TTC AAG TTA CCA GCT GAC CCC TCA ACT CCA ATT ATC ATG GTG GGA	1771/591
V R T S N F K L P A D P S T P I I M V G	
1741/581	
CCT GGT ACA GGG TTA GCT CCT TTC AGA GGA TTT CTG CAG GAA AGA ATG GCC CTC AAG GAA	1831/611
P G T G L A P F R G F L Q E R M A L K E	
1801/601	
AAT GGT GCT CAA CTT GGC CCA GCA GTG CTC TTT TTC GGA TGT AGG AAT CGT AAT ATG GAC	1891/631
N G A Q L G P A V L F F G C R N R N M D	
1861/621	
TTC ATT TAT GAA GAC GAA CTA AAC AAC TTC GTG GAA CGA GGA GTA ATT TCG GAG CTA GTT	1951/651
F I Y E D E L N N F V E R G V I S E L V	
1921/641	
ATT GCC TTT TCA CGT GAA GGG GAA AAG AAG GAA TAT GTT CAA CAT AAG ATG ATG GAG AAA	2011/671
I A F S R E G E K K E Y V Q H K M M E K	
1981/661	
GCA ACG GAT GTA TGG AAT GTG ATA TCA GGG GAC GGT TAT CTC TAT GTG TGT GGT GAT GCC	2071/691
A T D V W N V I S G D G Y L Y V C G D A	
2041/681	

Figure 9a (cont.).

13/20

AAG GGA ATG GCC AGA GAT GTC CAT CGC ACG TTG CAT ACC ATT GCC CAA GAA CAG GGA CCC  
K G M A R D V H R T L H T I A Q E Q G P  
2101/701 2131/711  
ATG GAA TCA TCT GCT GCC GAA GCT GCA GTA AAG AAA CTC CAA GTT GAA GAA CGA TAT CTA  
M E S S A A E A A V K K L Q V E E R Y L  
2161/721 2191/731  
AGA GAT GTC TGG TGA TCG AAT GTA GCT TGC CAA GTC CCC TTT TCT TGG CTG GTC TGT TTA  
R D V W \* S N V A C Q V P F S W L V C L  
2221/741 2251/751  
TGG TTT CTA TTA TAT TAT TGA TCC TCC TCT GAA AAT CCC AAG CAC TTC CAG ACA TCC CTC  
W F L L Y Y \* S S S E N P K H F Q T S L  
2281/761 2311/771  
GAT TCT TCC TCC AGT GGT TCC AAA TCG AAG CTC GGT ATA ATT GAG AGC AGT GCA ATT GTG  
D S S S S G S K S K L G I I E S S A I V  
2341/781 2371/791  
ACT ACA TGA GAA GCA AAC ATC GAA TAC CAT AGA ATT AGA AAG ATC AAA ATT CTC TTA TCA  
T T \* E A N I E Y H R I R K I K I L L S  
2401/801 2431/811  
GAA CAA TGT TAC AGG CAA AAC TGT GTT TGC TTA ATA TAA ATT TCA CAC CAT GGG TGT GGA  
E Q C Y R Q N C V C L I \* I S H H G C G  
2461/821 2491/831  
CAA CAC TGA AAC AGT ATT AGC TAT ACC AAC AAA GTT ATG CAA GGA AAC ACA AAC TAG TTA  
Q H \* N S I S Y T N K V M Q G N T N \* L  
2521/841 2551/851  
GAT CTT CTC TTT GGA TTG ATT ACT GTA AGT TCT AAC CAG ATG ATA GAT TGT ACT TAA AGA  
D L L F G L I T V S S N Q M I D C T \* R  
2581/861 2611/871  
TTC TTG TTT TCT TAT GGC TAC CGA GAG GAG TAT ATT AAT GCA TTT AGA GTT TTG AGA AAA  
F L F S Y G Y R E E Y I N A F R V L R K  
2641/881  
AAA AAA AAA A  
K K K

Figure 9a (cont.).

14/20

1/1 31/11  
TTC TTC TTC CAA TCG CAT TCG AGA AAA TTC AAT CAT CTT CAA CTT CAG GAA GAA GAA TCA  
F F F Q S H S R K F N H L Q L Q E E E S  
61/21 91/31  
TCA GAA ACA CTG AAG CTC ATC ATC ATC CTT GAA ACT TAT CGT CTT TGT TTG ACC TTT TGA  
S E T L K L I I I L E T Y R L C L T F \*  
121/41 151/51  
AAA ACT ATG GAA CAA ACT GCG GTT AAA GTC TCT TTG TTT GAT CTA TTT TCT TCG ATA CTT  
K T M E Q T A V K V S L F D L F S S I L  
181/61 211/71  
AAT GGA AAG TTG GAT CCG TCG AAC TTT TCT TCA GAT TCA AGT GCT GCT ATT TTG ATT GAA  
N G K L D P S N F S S D S S A A I L I E  
241/81 271/91  
AAT CGT GAG ATT TTA ATG ATC TTA ACA ACT GCT ATT GCT GTT TTT ATC GGT TGT GGT TTT  
N R E I L M I L T T A I A V F I G C G F  
301/101 331/111  
CTC TAC GTT TGG AGA AGA TCT TCA AAT AAG TCG AGT AAA ATT GTT GAA ACT CAG AAA TTG  
L Y V W R R S S N K S S K I V E T Q K L  
361/121 391/131  
ATC GTT GAA AAG GAA CCA GAA CCT GAA GTT GAT GAT GGA AAG AAG AAG GTT ACT ATC TTC  
I V E K E P E P E V D D G K K K V T I F  
421/141 451/151  
TTT GGT ACT CAA ACT GGT ACA GCT GAA GGA TTC GCA AAG GCA CTT GCT GAA GAA GCA AAA  
F G T Q T G T A E G F A K A L A E E A K  
481/161 511/171  
GCA AGA TAT GAA AAG GCA ATC TTT AAA GTG ATT GAT CTG GAT GAT TAC GGA GCA GAT GAT  
A R Y E K A I F K V I D L D D Y G A D D  
541/181 571/191  
GAT GAA TTC GAA GAG AAA TTG AAA AAG GAA ACT ATA GCT CTT TTC TTT TTG GCT ACC TAT  
D E F E E K L K K E T I A L F F L A T Y  
601/201 631/211  
GGA GAT GGT GAA CCT ACA GAT AAT GCT GCA AGA TTT TAT AAA TGG TTC ACA GAG GGA GAG  
G D G E P T D N A A R F Y K W F T E G E  
661/221 691/231  
AGG GAA ATG TGG CTC CAG AAT CTT CAA TTT GGT GTC TTC GGT CTA GGC AAT AGA CAG TAT  
R E M W L Q N L Q F G V F G L G N R Q Y  
721/241 751/251  
GAG CAT TTC AAT AAG GTG GCA AAG GAG GTG GAC GAG ATA CTC ACT GAA CAG GGT GGG AAG  
E H F N K V A K E V D E I L T E Q G G K  
781/261 811/271  
CGT ATT GTT CCC GTG GGT CTA GGA GAT GAT GAT CAA TGC ATA GAA GAT GAT TTC ACT GCG  
R I V P V G L G D D D Q C I E D D F T A  
841/281 871/291  
TGG CGG GAG TTG GTA TGG CCT GAA TTG GAT CAG TTG CTC CTT GAT GAA AGT GAT AAA ACA  
W R E L V W P E L D Q L L L D E S D K T  
901/301 931/311  
TCT GTT TCT ACT CCT TAC ACT GCC ATC GTA CCA GAA TAC AGG GTA GTA TTC CAT GAT GCT  
S V S T P Y T A I V P E Y R V V F H D A  
961/321 991/331  
ACT GAT GCA TCA CTA CAA GAC AAA AAC TGG AGC AAT GCA AAT GGC TAC ACT GTT TAC GAC  
T D A S L Q D K N W S N A N G Y T V Y D  
1021/341 1051/351

Figure 9b.

15/20

GTT CAA CAC CCA TGC AGA GCC AAT GTC GTT GTA AAG AAG GAG CTT CAC ACT CCA GTA TCT  
 V Q H P C R A N V V V K K E L H T P V S  
 1081/361 1111/371  
 GAT CGT TCT TGT ATT CAT CTG GAA TTT GAC ATT TCT GGC ACT GGG CTC ACG TAT GAA ACA  
 D R S C I H L E F D I S G T G L T Y E T  
 1141/381 1171/391  
 GGA GAC CAT GTC GGT GTT TAC TCT GAG AAT TGT GTT GAA GTT GTC GAG GAA GCA GAG AGG  
 G D H V G V Y S E N C V E V V E E A E R  
 1201/401 1231/411  
 CTA TTG GGT TAC TCA TCA GAC ACC GTT TTT TCA ATC CAT GTC GAT AAA GAG GAC GGC TCA  
 L L G Y S S D T V F S I H V D K E D G S  
 1261/421 1291/431  
 CCC ATT AGT GGA AGC GCT CTA GCT CCT CCT TTT CCA ACT CCC TGC ACT CTA AGA ACA GCA  
 P I S G S A L A P P F P T P C T L R T A  
 1321/441 1351/451  
 CTA ACA CGA TAC GCT GAT CTG TTG AAT TCT CCC AAG AAG GCT GCT CTG CAT GCT TTG GCT  
 L T R Y A D L L N S P K K A A L H A L A  
 1381/461 1411/471  
 GCT TAT GCA TCC GAT CCA AAG GAA GCG GAG CGA CTA AGG TAT CTT GCG TCT CCT GCT GGG  
 A Y A S D P K E A E R L R Y L A S P A G  
 1441/481 1471/491  
 AAG GAC GAA TAC GCC CAG TGG ATA GTA GCT AGT CAG AGA AGT CTG CTA GTG GTC ATG GCT  
 K D E Y A Q W I V A S Q R S L L V V M A  
 1501/501 1531/511  
 GAA TTC CCA TCA GCA AAG GCT CCA ATT GGG GTT TTC TTT GCA GCA GTA GCT CCT CGC TTG  
 E F P S A K A P I G V F F A A V A P R L  
 1561/521 1591/531  
 CTG CCA AGA TAC TAT TCT ATT TCA TCT TCC AAT AGG ATG GTA CCA TCT AGG ATT CAT GTC  
 L P R Y Y S I S S S N R M V P S R I H V  
 1621/541 1651/551  
 ACA TGT GCA TTG GTG CAT GAA AAA ACA CCG GCA GGT CGG GTT CAC AAA GGA GTG TGT TCA  
 T C A L V H E K T P A G R V H K G V C S  
 1681/561 1711/571  
 ACC TGG ATG AAG AAT TCT GTG TCT TTG GAA GAA AAC CAT GAT TGC AGC AGC TGG GCA CCA  
 T W M K N S V S L E E N H D C S S W A P  
 1741/581 1771/591  
 ATC TTT GTC AGG CAA TCC AAC TTC AAA CTT CCT GCT GAT TCT ACA GTA CCA ATT ATA ATG  
 I F V R Q S N F K L P A D S T V P I I M  
 1801/601 1831/611  
 ATT GGT CCT GGG ACT GGA TTA GCT CCC TTT AGG GGA TTC ATG CAG GAG CGA TTA GCT CTG  
 I G P G T G L A P F R G F M Q E R L A L  
 1861/621 1891/631  
 AAG AAT TCT GGT GTA GAA TTG GGA CCC GCT ATC CTC TTC TTT GGA TGC AGA AAC AGA CAG  
 K N S G V E L G P A I L F F G C R N R Q  
 1921/641 1951/651  
 ATG GAT TAC ATA TAT GAA GAG GAG CTA AAC AAC TTT GTG AAA GAG GGA GCT ATC TCC GAA  
 M D Y I Y E E E L N N F V K E G A I S E  
 1981/661 2011/671  
 GTT GTT GTT GCT TTC TCA CGT GAG GGA GCT ACC AAG GAA TAC GTA CAA CAT AAA ATG GCG  
 V V V A F S R E G A T K E Y V Q H K M A  
 2041/681 2071/691

Figure 9b (cont.).

16/20

GAG AAG GCT TCC TAC ATC TGG GAA ATG ATC TCT CAA GGT GCT TAT CTT TAT GTA TGT GGT  
E K A S Y I W E M I S Q G A Y L Y V C G  
2101/701 2131/711  
GAT GCC AAG GGC ATG GCT AGA GAC GTA CAT CGA ACT CTC CAC ACC ATT GCC CAG GAA CAG  
D A K G M A R D V H R T L H T I A Q E Q  
2161/721 2191/731  
GGA TCT TTG GAC AAC TCG AAG ACC GAA AGC TTG GTG AAG AAT CTA CAG ATG GAT GGA AGG  
G S L D N S K T E S L V K N L Q M D G R  
2221/741 2251/751  
TAT CTA CGT GAT GTG TGG TGA TTG ATT TTT TCA GCA CGG TTA CAA TCT AGC TTC ATC AAA  
Y L R D V W \* L I F S A R L Q S S F I K  
2281/761 2311/771  
GAA CGC GCT TGA GAA GCA TAA ATC TTA GTT GCA GAG ATG TTG ATT TCA GAA GAA ATG CTT  
E R A \* E A \* I L V A E M L I S E E M L  
2341/781 2371/791  
TAT ATA CTT GAG GTA GCG GAC ATT AAT CCT TTT CTC TCT CTC TAA ACT GTT AAT CCT GTA  
Y I L E V A D I N P F L S L \* T V N P V  
2401/801 2431/811  
AAA AAG GGA TTG CTG TTT GTG TTT-GCT CGC AAT CAA TTA AGT TAT ATT CTT TGG TCT ATG  
K K G L L F V F A R N Q L S Y I L W S M  
2461/821 2491/831  
GCA TTC GTT AGA CAA ATA TAT TAA CGA GTT TGT CCG TTA TAT ATG ACA TAT GAA ACA AAA  
A F V R Q I Y \* R V C P L Y M T Y E T K  
2521/841 2551/851  
GAA CTT CTG TTT GGA GGA AGA GAA AAA AAA AAA AAA AA  
E L L F G G R E K K K K

*Figure 9b (cont.).*

005 827 018 019100 16/20



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1 AAGCTTCAGAGTCTCTGCTAATT ATG GGT TCG AAT AAT TTA GCT AAT TCG ATT GAA TCG ATG TTA 65  
 1 M G S N N L A N S I E S M L 14

66 GGA ATA TCA ATA GGA TCA GAA TAT ATT TCT GAC CCA ATT TTC ATT ATG GTC ACA ACT GTA 125  
 15 G I S I G S E Y I S D P I F I M V T T V 34

126 GCT TCA ATG CTG ATT GGA TTT GGT TTC TTC GCA TGT ATG AAA TCT TCG TCT TCT CAA TCA 185  
 35 A S M L I G F G F F A C M K S S S S Q S 54

186 AAA CCT ATT GAA ACT TAT AAA CCA ATA ATT GAT AAA GAA GAA GAG GAG ATT GAA GTT GAT 245  
 55 K P I E T Y K P I I D K E E E E I E V D 74

246 CCT GGT AAA ATT AAG CTC ACT ATA TTT TTT GGT ACT CAG ACT GGT ACT GCT GAA GGA TTT 305  
 75 P G K I K L T I F F G T Q T G T A E G F 94

306 GCT AAG GCA TTG GCA GAA GAA ATT AAG GCA AAG TAC AAG AAA GCA GTT GTT AAA GTA GTT 365  
 95 A K A L A E E I K A K Y K K A V V K V V 114

366 GAC CTG GAT GAC TAT GCA GCC GAG GAT GAT CAA TAT GAA GAG AAA TTA AAG AAA GAG TCT 425  
 115 D L D D Y A A E D D Q Y E E K L K K E S 134

426 TTG GTG TTT TTC ATG GTA GCC ACT TAT GGT GAT GGT GAG CCA ACT GAC AAT GCT GCG AGA 485  
 135 L V F F M V A T Y G D G E P T D N A A R 154

486 TTT TAC AAA TGG TTC ACT CAG GAA CAT GAA AGG GGA GAG TGG CTT CAG CAA CTA ACT TAT 545  
 155 F Y K W F T Q E H E R G E W L Q Q L T Y 174

546 GGT GTT TTT GGT TTG GGT AAC CGT CAA TAC GAG CAT TTC AAC AAG ATC GCG GTA GAT GTG 605  
 175 G V F G L G N R Q Y E H F N K I A V D V 194

606 GAT GAG CAA CTC GGT AAA CAA GGT GCA AAG CGC ATT GTT CAA GTG GGG CTC GGT GAC GAT 665  
 195 D E Q L G K Q G A K R I V Q V G L G D D 214

666 GAT CAA TGC ATT GAA GAT GAT TTT ACT GCT TGG CGA GAA TTG TTG TGG ACT GAA TTG GAT 725  
 215 D Q C I E D D F T A W R E L L W T E L D 234

726 CAG TTG CTC AAA GAT GAG GAT GCT GCT CCT TCA GTG GCT ACA CCG TAT ATT GCT ACT GTT 785  
 235 Q L L K D E D A A P S V A T P Y I A T V 254

786 CCT GAA TAC AGG GTA GTG ATT CAC GAA ACT ACG GTC GCG GCT CTG GAT GAT AAA CAC ATA 845  
 255 P E Y R V V I H E T T V A A L D D K H I 274

846 AAT ACT GCT AAC GGC GAT GTT GCA TTT GAT ATT CTC CAT CCT TGC AGA ACC ATT GTT GCT 905  
 275 N T A N G D V A F D I L H P C R T I V A 294

906 CAA CAA AGA GAG CTC CAC AAA CCC AAG TCT GAT AGA TCC TGT ATA CAT CTG GAG TTC GAC 965  
 295 Q Q R E L H K P K S D R S C I H L E F D 314

966 ATA TCA GGC TCT TCC CTT ACA TAT GAG ACT GGA GAT CAT GTT GGT GTT TAT GCT GAG AAC 1025  
 315 I S G S S L T Y E T G D H V G V Y A E N 334

1026 TGC GAT GAA ACT GTC GAG GAA GCA GGG AAG CTG TTG GGT CAA CCC CTG GAT TTG CTG TTT 1085  
 335 C D E T V E E A G K L L G Q P L D L L F 354

1086 TCA ATT CAC ACG GAT AAA GAA GAC GGG TCA CCC CAG GGA AGC TCA TTA CCA CCT CCT TTC 1145  
 355 S I H T D K E D G S P Q G S S L P P P F 374

Figure 10a

AC

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1146	CCA	GGT	CCT	TGC	ACC	TTA	CGA	TCT	GCC	CTA	GCA	CGC	TAT	GCT	GAT	CTT	TTG	AAT	CCT	CCT	1205
375	P	G	P	C	T	L	R	S	A	L	A	R	Y	A	D	L	L	N	P	P	394
1206	AGA	AAG	GCT	TCT	CTG	ATT	GCT	CTG	TCC	GCT	CAT	GCA	TCT	GTA	CCC	AGT	GAA	GCA	GAG	AGA	1265
395	R	K	A	S	L	I	A	L	S	A	H	A	S	V	P	S	E	A	E	R	414
1266	TTG	CGC	TTT	TTG	TCA	TCA	CCT	CTG	GGA	AAG	AAT	GAG	TAT	TCA	AAA	TGG	GTA	GTT	GGA	AGT	1325
415	L	R	F	L	S	S	P	L	G	K	N	E	Y	S	K	W	V	V	G	S	434
1326	CAG	AGG	AGT	CTT	TTG	GAG	ATC	ATG	GCC	GAG	TTT	CCA	TCA	GCA	AAA	CCC	CCT	CTT	GGT	GTT	1385
435	Q	R	S	L	L	E	I	M	A	E	F	P	S	A	K	P	P	L	G	V	454
1386	TTC	TTT	GCT	GCA	GTA	GCC	CCT	CGC	TTA	CCG	CCT	CGA	TAC	TAT	TCT	ATC	TCA	TCC	TCT	CCT	1445
455	F	F	A	A	V	A	P	R	L	P	P	R	Y	Y	S	I	S	S	S	P	474
1446	AAG	TTT	GCT	CCC	TCA	AGA	ATT	CAT	GTG	ACG	TGT	GCT	TTA	GTA	TAT	GGT	CAA	AGC	CCT	ACC	1505
475	K	F	A	P	S	R	I	H	V	T	C	A	L	V	Y	G	Q	S	P	T	494
1506	GGA	AGG	GTT	CAC	CGA	GGA	GTG	TGT	TCG	ACA	TGG	ATG	AAG	CAT	GCA	GTT	CCT	CAG	GAT	AGC	1565
495	G	R	V	H	R	G	V	C	S	T	W	M	K	H	A	V	P	Q	D	S	514
1566	TGG	GCT	CCT	ATT	TTT	GTT	CGA	ACG	TCA	AAC	TTC	AAG	TTA	CCA	GCT	GAC	CCC	TCA	ACT	CCA	1625
515	W	A	P	I	F	V	R	T	S	N	F	K	L	P	A	D	P	S	T	P	534
1626	ATT	ATC	ATG	GTG	GGA	CCT	GGT	ACA	GGG	TTA	GCT	CCT	TTC	AGA	GGA	TTT	CTG	CAG	GAA	AGA	1685
535	I	I	M	V	G	P	G	T	G	L	A	P	F	R	G	F	L	Q	E	R	554
1686	ATG	GCC	CTC	AAG	GAA	AAT	GGT	GCT	CAA	CTT	GGC	CCA	GCA	GTG	CTC	TTT	TTC	GGA	TGT	AGG	1745
555	M	A	L	K	E	N	G	A	Q	L	G	P	A	V	L	F	F	G	C	R	574
1746	AAT	CGT	AAT	ATG	GAC	TTC	ATT	TAT	GAA	GAC	GAA	CTA	AAC	AAC	TTC	GTG	GAA	CGA	GGA	GTA	1805
575	N	R	N	M	D	F	I	Y	E	D	E	L	N	N	F	V	E	R	G	V	594
1806	ATT	TCG	GAG	CTA	GTT	ATT	GCC	TTT	TCA	CGT	GAA	GGG	GAA	AAG	AAG	GAA	TAT	GTT	CAA	CAT	1865
595	I	S	E	L	V	I	A	F	S	R	E	G	E	K	K	E	Y	V	Q	H	614
1866	AAG	ATG	ATG	GAG	AAA	GCA	ACG	GAT	GTA	TGG	AAT	GTG	ATA	TCA	GGG	GAC	GGT	TAT	CTC	TAT	1925
615	K	M	M	E	K	A	T	D	V	W	N	V	I	S	G	D	G	Y	L	Y	634
1926	GTG	TGT	GGT	GAT	GCC	AAG	GGA	ATG	GCC	AGA	GAT	GTC	CAT	CGC	ACG	TTG	CAT	ACC	ATT	GCC	1985
635	V	C	G	D	A	K	G	M	A	R	D	V	H	R	T	L	H	T	I	A	654
1986	CAA	GAA	CAG	GGA	CCC	ATG	GAA	TCA	TCT	GCT	GCC	GAA	GCT	GCA	GTA	AAG	AAA	CTC	CAA	GTT	2045
655	Q	E	Q	G	P	M	E	S	S	A	A	E	A	A	V	K	K	L	Q	V	674
2046	GAA	GAA	CGA	TAT	CTA	AGA	GAT	GTC	TGG	TGA	TCGA	ATG	TAG	CTTGCCAATcactag							2100
675	E	E	R	Y	L	R	D	V	W	*		M	*								2

Figure 10a (cont.).

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1	tcgagcccggggatccgccCT	ATG GAA CAA ACT GCG GTT AAA GTC TCT TTG TTT GAT CTA TTT	64
1		M E Q T A V K V S L P D L P	14
65	TCT TCG ATA CTT AAT GGA AAG TTG GAT CCG TCG AAC TTT TCT TCA GAT TCA AGT GCT GCT	124	
15	S S I L N G K L D P S N F S S D S S A A	34	
125	ATT TTG ATT GAA AAT CGT GAG ATT TTA ATG ATC TTA ACA ACT GCT ATT GCT GTT TTT ATC	184	
35	I L I E N R E I L M I L T T A I A V F I	54	
185	GGT TGT GGT TTT CTC TAC GTT TGG AGA AGA TCT TCA AAT AAG TCG AGT AAA ATT GTT GAA	244	
55	G C G F L Y V W R R S S N K S S K I V E	74	
245	ACT CAG AAA TTG ATC GTT GAA AAG GAA CCA GAA CCT GAA GTT GAT GAT GGA AAG AAG AAG	304	
75	T Q K L I V E K E P E P E V D D G K K K	94	
305	GTT ACT ATC TTC TTT GGT ACT CAA ACT GGT ACA GCT GAA GGA TTC GCA AAG GCA CTT GCT	364	
95	V T I F F G T Q T G T A E G F A K A L A	114	
365	GAA GAA GCA AAA GCA AGA TAT GAA AAG GCA ATC TTT AAA GTG ATT GAT CTG GAT GAT TAC	424	
115	E E A K A R Y E K A I F K V I D L D D Y	134	
425	GGA GCA GAT GAT GAT GAA TTC GAA GAG AAA TTG AAA AAG GAA ACT ATA GCT CTT TTC TTT	484	
135	G A D D D E F E E K L K K E T I A L F F	154	
485	TTG GCT ACC TAT GGA GAT GGT GAA CCT ACA GAT AAT GCT GCA AGA TTT TAT AAA TGG TTC	544	
155	L A T Y G D G E P T D N A A R F Y K W F	174	
545	ACA GAG GGA GAG AGG GAA ATG TGG CTC CAG AAT CTT CAA TTT GGT GTC TTC GGT CTA GGC	604	
175	T E G E R E M W L Q N L Q F G V F G L G	194	
605	AAT AGA CAG TAT GAG CAT TTC AAT AAG GTG GCA AAG GAG GTG GAC GAG ATA CTC ACT GAA	664	
195	N R Q Y E H F N K V A K E V D E I L T E	214	
665	CAG GGT GGG AAG CGT ATT GTT CCC GTG GGT CTA GGA GAT GAT GAT CAA TGC ATA GAA GAT	724	
215	Q G G K R I V P V G L G D D D Q C I E D	234	
725	GAT TTC ACT GCG TGG CGG GAG TTG GTA TGG CCT GAA TTG GAT CAG TTG CTC CTT GAT GAA	784	
235	D F T A W R E L V W P E L D Q L L L D E	254	
785	AGT GAT AAA ACA TCT GTT TCT ACT CCT TAC ACT GCC ATC GTA CCA GAA TAC AGG GTA GTA	844	
255	S D K T S V S T P Y T A I V P E Y R V V	274	
845	TTC CAT GAT GCT ACT GAT GCA TCA CTA CAA GAC AAA AAC TGG AGC AAT GCA AAT GGC TAC	904	
275	F H D A T D A S L Q D K N W S N A N G Y	294	
905	ACT GTT TAC GAC GTT CAA CAC CCA TGC AGA GCC AAT GTC GTT GTA AAG AAG GAG CTT CAC	964	
295	T V Y D V Q H P C R A N V V V K K E L H	314	
965	ACT CCA GTA TCT GAT CGT TCT TGT ATT CAT CTG GAA TTT GAC ATT TCT GGC ACT GGG CTC	1024	
315	T P V S D R S C I H L E F D I S G T G L	334	
1025	ACG TAT GAA ACA GGA GAC CAT GTC GGT GTT TAC TCT GAG AAT TGT GTT GAA GTT GTC GAG	1084	
335	T Y E T G D H V G V Y S E N C V E V V E	354	
1085	GAA GCA GAG AGG CTA TTG GGT TAC TCA TCA GAC ACC GTT TTT TCA ATC CAT GTC GAT AAA	1144	
355	E A E R L L G Y S S D T V F S I H V D K	374	

Figure 10b

1145	GAG	GAC	GGC	TCA	CCC	ATT	AGT	GGA	AGC	GCT	CTA	GCT	CCT	CCT	TTT	CCA	ACT	CCC	TGC	ACT	1204
375	E	D	G	S	P	I	S	G	S	A	L	A	P	P	F	P	T	P	C	T	394
1205	CTA	AGA	ACA	GCA	CTA	ACA	CGA	TAC	GCT	GAT	CTG	TTG	AAT	TCT	CCC	AAG	AAG	GCT	GCT	CTG	1264
395	L	R	T	A	L	T	R	Y	A	D	L	L	N	S	P	K	K	A	A	L	414
1265	CAT	GCT	TTG	GCT	GCT	TAT	GCA	TCC	GAT	CCA	AAG	GAA	GCG	GAG	CGA	CTA	AGG	TAT	CTT	GCG	1324
415	H	A	L	A	A	Y	A	S	D	P	K	E	A	E	R	L	R	Y	L	A	434
1325	TCT	CCT	GCT	GGG	AAG	GAC	GAA	TAC	GCC	CAG	TGG	ATA	GTA	GCT	AGT	CAG	AGA	AGT	CTG	CTA	1384
435	S	P	A	G	K	D	E	Y	A	Q	W	I	V	A	S	Q	R	S	L	L	454
1385	GTG	GTC	ATG	GCT	GAA	TTC	CCA	TCA	GCA	AAG	GCT	CCA	ATT	GGG	GTT	TTC	TTT	GCA	GCA	GTA	1444
455	V	V	M	A	E	F	P	S	A	K	A	P	I	G	V	F	F	A	A	V	474
1445	GCT	CCT	CGC	TTG	CTG	CCA	AGA	TAC	TAT	TCT	ATT	TCA	TCT	TCC	AAT	AGG	ATG	GTA	CCA	TCT	1504
475	A	P	R	L	L	P	R	Y	Y	S	I	S	S	S	N	R	M	V	P	S	494
1505	AGG	ATT	CAT	GTC	ACA	TGT	GCA	TTG	GTG	CAT	GAA	AAA	ACA	CCG	GCA	GGT	CGG	GTT	CAC	AAA	1564
495	R	I	H	V	T	C	A	L	V	H	E	K	T	P	A	G	R	V	H	K	514
1565	GGA	GTG	TGT	TCA	ACC	TGG	ATG	AAG	AAT	TCT	GTG	TCT	TTG	GAA	GAA	AAC	CAT	GAT	TGC	AGC	1624
515	G	V	C	S	T	W	M	K	N	S	V	S	L	E	E	N	H	D	C	S	534
1625	AGC	TGG	GCA	CCA	ATC	TTT	GTC	AGG	CAA	TCC	AAC	TTC	AAA	CTT	CCT	GCT	GAT	TCT	ACA	GTA	1684
535	S	W	A	P	I	F	V	R	Q	S	N	F	K	L	P	A	D	S	T	V	554
1685	CCA	ATT	ATA	ATG	ATT	GGT	CCT	GGG	ACT	GGA	TTA	GCT	CCC	TTT	AGG	GGA	TTC	ATG	CAG	GAG	1744
555	P	I	I	M	I	G	P	G	T	G	L	A	P	F	R	G	F	M	Q	E	574
1745	CGA	TTA	GCT	CTG	AAG	AAT	TCT	GGT	GTA	GAA	TTG	GGA	CCC	GCT	ATC	CTC	TTC	TTT	GGA	TGC	1804
575	R	L	A	L	K	N	S	G	V	E	L	G	P	A	I	L	F	F	G	C	594
1805	AGA	AAC	AGA	CAG	ATG	GAT	TAC	ATA	TAT	GAA	GAG	GAG	CTA	AAC	AAC	TTT	GTG	AAA	GAG	GGA	1864
595	R	N	R	Q	M	D	Y	I	Y	E	E	E	L	N	N	F	V	K	E	G	614
1865	GCT	ATC	TCC	GAA	GTT	GTT	GTT	GCT	TTC	TCA	CGT	GAG	GGA	GCT	ACC	AAG	GAA	TAC	GTA	CAA	1924
615	A	I	S	E	V	V	V	A	F	S	R	E	G	A	T	K	E	Y	V	Q	634
1925	CAT	AAA	ATG	GCG	GAG	AAG	GCT	TCC	TAC	ATC	TGG	GAA	ATG	ATC	TCT	CAA	GGT	GCT	TAT	CTT	1984
635	H	K	M	A	E	K	A	S	Y	I	W	E	M	I	S	Q	G	A	Y	L	654
1985	TAT	GTA	TGT	GGT	GAT	GCC	AAG	GGC	ATG	GCT	AGA	GAC	GTA	CAT	CGA	ACT	CTC	CAC	ACC	ATT	2044
655	Y	V	C	G	D	A	K	G	M	A	R	D	V	H	R	T	L	H	T	I	674

*Figure 10b (cont.).*